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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/555,077	01/23/2007	Marcello Caramma	MTKP0894USA	9456
27765	7590	07/06/2009	EXAMINER	
NORTH AMERICA INTELLECTUAL PROPERTY CORPORATION P.O. BOX 506 MERRIFIELD, VA 22116				CHASE, SHELLY A
ART UNIT		PAPER NUMBER		
		2112		
NOTIFICATION DATE			DELIVERY MODE	
07/06/2009			ELECTRONIC	

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

winstonhsu.uspto@gmail.com  
Patent.admin.uspto.Rcv@naipo.com  
mis.ap.uspto@naipo.com.tw

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/555,077	CARAMMA, MARCELLO	
	<b>Examiner</b>	<b>Art Unit</b>	
	Shelly A. Chase	2112	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 23 January 2007.  
 2a) This action is **FINAL**.                    2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1-21 is/are pending in the application.  
 4a) Of the above claim(s) 4-9 and 13-19 is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 1-3,10-12,20 and 21 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on 28 October 2005 is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) Notice of References Cited (PTO-892)  
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)  
 3) Information Disclosure Statement(s) (PTO/SB/08)  
 Paper No(s)/Mail Date 1-23-2007.

4) Interview Summary (PTO-413)  
 Paper No(s)/Mail Date. \_\_\_\_\_.  
 5) Notice of Informal Patent Application  
 6) Other: \_\_\_\_\_.

## **DETAILED ACTION**

1. Claims 1 to 21 are presented for examination.

### ***Priority***

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119, which papers have been placed of record in the file.

### ***Information Disclosure Statement***

3. The references listed in the information disclosure statement submitted on 1-23-2007 have been considered by the examiner (see attached PTO-1449).

### ***Claim Objections***

4. Claims 4 to 9 and 13 to 19 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim should refer to other claims in the alternative only and cannot depend from any other multiple dependent claim. See MPEP § 608.01(n). Accordingly, the claims have not been further treated on the merits.

### ***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claims 20 and 21 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claims contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The claims are single means claims attempting to claim every conceivable

means for achieving the stated results with the specification only directed to the inventions known to the inventor.

7. Claims 20 to 21 are rejected under 35 U.S.C. 112, first paragraph, as based on a disclosure which is not enabling. The specification on page 5 indicates that figure 5 has an alternative construction critical or essential to the practice of the invention, but not included in the claims is not enabled by the disclosure. See *In re Mayhew*, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976).

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claims 20 to 21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 20 and 21 are vague, unclear and does not set forth the subject matter that applicant regards as the invention.

### ***Claim Rejections - 35 USC § 101***

10. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

11. Claims 20 and 21 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The language of the claim raises a question as to whether the claims are directed merely to an abstract idea that is not tied

to a technology art, environment or machine which would result in a practical application producing a concrete, useful, and tangible result to form the basis of statutory subject matter under 35 U.S.C. 101.

***Claim Rejections - 35 USC § 102***

12. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

13. Claims 1 to 3 and 10 to 12 are rejected under 35 U.S.C. 102(e) as being anticipated by Traeber (USP 6813744 B1).

**Claim 1:**

Traeber teaches the claimed invention. Traeber teaches an add-compare select (ACS) unit for a Viterbi decoder, comprising the steps of: determining the upper and lower path metrics ( $Y_{t+1}^{(0)}$  and  $Y_{t+1}^{(1)}$ ) of two states in one time step  $t$  and determining the differences of the upper and lower path metrics (see col. 5, line 55 to col. 6, line 15).

Traeber also teaches that a comparison step is performed between the differences of the path metrics and the differences of the branch metrics (see col. 6, lines 10 et seq.).

Traeber teaches that a path metric for one state is the combination of a path metric of a previous time step and a connecting branch metric (see col. 6, lines 5 to 10), which reads on “selecting, on the basis of said first comparison, one of the old path metrics for a first combination with the branch metric.” Traeber further teaches that a final path metric is produced from an adder based on the results of the comparison of the path metrics (see col. 7, lines 2 et seq.), which reads on “selecting on the basis of said first comparison, whether said first combination is by addition or subtraction.”

As per claims 2 and 3, Traeber teaches the computation between the differences of the path metrics and the differences of the branch metrics produces a sign (+/-) that can be used to determine the results (see col. 6, lines 34 et seq.), as well as storing the results of the comparison in a survivor memory for feedback (see col. 8, lines 50 to 68).

**Claim 10:**

**Traeber** teaches the claimed invention. Traeber teaches an add-compare select (ACS) unit for a Viterbi decoder, comprising: determining the upper and lower path metrics ( $Y_{t+1}^{(0)}$  and  $Y_{t+1}^{(1)}$ ) of two states in one time step  $t$  using a subtractor (2) (see col. 7, lines 13 to 16) wherein the differences of the upper and lower path metrics are determined (see col. 5, line 55 to col. 6, line 15). Traeber also teaches that a comparison step is performed by an evaluation unit (6) between the differences of the path metrics and the differences of the branch metrics (see col. 6, lines 10 et seq.).

Traeber teaches that a path metric for one state is the combination of a path metric of a previous time step and a connecting branch metric (see col. 6, lines 5 to 10), which reads on “selecting, on the basis of said first comparison, one of the old path metrics for a first combination with the branch metric.” Traeber further teaches that a final path metric is produced from an adder based on the results of the comparison of the smaller path metric that is selected from multiplexers (8, 9, 10 & 11) (see col. 7, lines 2 et seq.), which reads on “selecting on the basis of said first comparison, whether said first combination is by addition or subtraction.”

As per claims 11 and 12, Traeber teaches the computation between the differences of the path metrics and the differences of the branch metrics produces a sign that can be used to determine the results (see col. 6, lines 34 et seq.), as well as storing the results of the comparison in a survivor memory for feedback (see col. 8, lines 50 to 68).

### ***Conclusion***

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shelly A. Chase whose telephone number is 571-272-3816. The examiner can normally be reached on Mon-Fri from 8:00 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Scott Baderman can be reached on 571-272-3644. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Shelly A Chase/  
Primary Examiner, Art Unit 2112